

Application No. 09/921,616
Amendment dated January 17, 2006
Reply to Final Office Action dated July 18, 2005
Express Mail EV723448374US

Amendments to the Specification

Please replace paragraph [0019] with the following.

[0019] In yet another aspect, the packet, or a group of packets, is tagged by specifying at least one user serial number. A user serial number is an identification code corresponding to a particular user's terminal. The user terminal can read the packet if the user serial number is specified. The packets may be a datacast of content, e.g., video-on-demand. The packets may be in motion picture expert group ("MPEG") format. The user terminal may be a personal computer or a set top box. The packets may be broadcast by radio frequency ("RF"), cable, or satellite.

Please replace paragraph [0023] with the following.

[0023] The invention provides control over content sent to a user from a broadcaster or from a server in communication with a user by a web portal. The broadcaster can control which users may view content from a packet by tagging the packet ID with the user terminal serial number. The user terminal may be remotely enabled to only view content if the user terminal serial number is in the packet ID. The packets may be further protected from unauthorized viewing by encrypting the packets before the packets are broadcast to a user. In another aspect, the invention monitors viewing habits of users. If the user views content from a packet, the packet information is recorded. The packet information includes information identifying the content, the time that a user viewed the content, and the amount of the content viewed.

Please replace paragraph [0028] with the following.

[0028] Figure 4 is a flow diagram of an embodiment of the user terminal showing steps for receiving, viewing, and recording content.

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Please replace paragraph [0034] with the following.

[0034] As used herein, a “module” refers to a software program, application, routine, or subroutine, or a programmable processor or chip. As would be understood by one of ordinary skill in the art, modules may be configured in many combinations to accomplish the same function. An example of a software module is any block of code that may be logically grouped together and may or may not use the conventional subroutine interfaces as defined by typical programming languages. A program routine or subroutine is generally understood as a stylistic convention of programming, and thus different routines or subroutines may be written in multiple combinations and accomplish the same function. As used herein, a “module” includes any block of code or programmable processor or chip having a function that may be logically grouped together regardless of whether conventional subroutine interfaces as defined by typical programming languages are used or specific processors or chip configurations are used.

Please replace paragraph [0039] with the following.

[0039] Figure 2 is a block diagram of a network of user terminals 13a-13n connected by the Internet 15 to the server 17. The server 17 is in communication with a network console 21. The network console 21 accepts inputs from an administrator. The inputs include user information and content information.

Please replace paragraph [0042] with the following.

[0042] The server 17 is in communication with a secondary server 31. The execute request module 51 obtains information regarding schedules and user viewing information from a secondary server 31. The secondary server 31 may be included in the same physical server machine as the server 17 or the secondary server 31 may be a separate machine. The secondary server 31 includes an encryption control module 53, a remote on/off module 55, a data mining module 57, and an application branding module 59. The secondary server may include other modules 63.

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Please replace paragraph [0043] with the following.

[0043] The encryption control module 53 sends encryption keys to the user terminal 13 to enable viewing permissions. For example, the user requests a specific program ("content"), and sends this information to the process request module 49. The execute request module 51 requests the appropriate encryption keys from the encryption control module 53 to enable the user viewing permission. The execute request module 51 sends the appropriate encryption key to the user terminal 13. Preferably, the encryption key includes the user serial number such that the encryption key only works if used by the user terminal corresponding to the user serial number.

Please replace paragraph [0049] with the following.

[0049] A viewing module 39 displays content to the user on a display or GUI 33. Content, which comprises tagged packets, is viewed by the viewing module 39, and the packet information is sent from the user terminal 13 to the server 17 by the Internet 15. As previously discussed, information about the viewed content may be analyzed by the server 17, and more specifically, by the data mining module 57.

Please replace paragraph [0050] with the following.

[0050] An organizing module 41 organizes content based on user specifications. For example, the user may enter a request through the GUI 33 to see a schedule of every stock car race available. The organizing module 41 would display such a schedule.

Please replace paragraph [0051] with the following.

[0051] A customizing module 43 customizes the content based on user specifications. The customizing module 43 accepts inputs from the user to define search and query functions. For example, the user can define criteria and the customizing module 43 will search the content information for content that matches the user defined criteria.

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Please replace paragraph [0052] with the following.

[0052] A tuner module 44 tunes broadcasts received by the user terminal 13. Tuning refers to choosing a particular channel or specific content to be downloaded or received by the user terminal 13. The tuner module 44 is described in greater detail in Figure 8 and the accompanying discussion.

Please replace paragraph [0054] with the following.

[0054] Figure 4 is a flow diagram of an embodiment of the user terminal 13 showing steps for receiving, viewing, and recording content. The user terminal 13 includes a GUI 33. Analog content 93 is received and decoded at step 95. The analog content 93 is then viewed at step 97. Digital content 73 is also received by the user terminal 13. The user can input instructions to the GUI to either view the digital content 73 at step 75, record the digital content 73 at step 77, "time shift" the digital content 73 at step 79, or playback the recorded digital content 73 at step 81. The user chooses the input options from a menu displayed by the GUI. The user chooses either step 75, 77, 79, or 81 by entering an option into the menu from a keyboard, touch sensitive screen, or mouse.

Please replace paragraph [0057] with the following.

[0057] The bit stream is sent as input to a capture filter 107. The capture filter 107 identifies bits from the demodulator 103 before sending the bits to the appropriate destination. The bits are recorded or captured by a capture bit stream module 109. Bits are removed from the bit stream by a remove bits module 111. By the term "removed," it is meant that bits are scrambled according to the encryption algorithm.

Please replace paragraph [0058] with the following.

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[0058] An encryption algorithm module 113 retrieves an encryption algorithm from electronic programmable read only memory ("EPROM") 115. As would be understood by one of ordinary skill in the art, an EPROM is typically included on a processor. In the embodiment illustrated in Figure 5, the EPROM is included on the user terminal. The encryption algorithm module 113 encrypts the files, which are then sent to a Peripheral Component Interconnect ("PCI") 117 for storage on a hard drive 119.

Please replace paragraph [0060] with the following.

[0060] A DTV decode module 125 decodes the decrypted bits into audio bits 131, video bits 129 and data bits 127. The audio bits 131, video bits 129 and data bits 127 may be viewed at the user terminal.

Please replace paragraph [0062] with the following.

[0062] The server 17 includes a header encryption module 207 for encrypting the content into encrypted packets. The server 17 and the broadcaster 11 are in communication by an Internet connection. Therefore, the encrypted packets may be transferred from the server 17 directly to the user terminal 13, or the encrypted packets may be sent to the broadcaster 11 and then sent to the user terminal 13.

Please replace paragraph [0064] with the following.

[0064] Figure 8 is a flow diagram of an example of the user terminal's processing of content packets through the tuner module. The relationship of the tuner module 44 in the system is depicted in Figure 3. At step 141, the user terminal receives encrypted, tagged packets. The tag includes the serial numbers for users who have permission to view the content in the packet. The user terminal receives user input choosing which content to view or record at step 143. The user input may be received through conventional means, such as a GUI, keyboard, mouse, or touch screen. The input is received by the tuner module.